



## **Commonwealth Transportation Board Environmental Subcommittee**

DoubleTree by Hilton  
1900 Pavilion Drive  
Virginia Beach, VA 23451  
October 25, 2022

### **Minutes**

*The meeting was called to order at 09:03 a.m.*

Members of the Subcommittee in attendance: Angel Deem (Chair), Mary Hynes, Scott Kasprowicz, Mark Merrill, and Raymond Smoot.

### **Welcome**

Angel Deem, VDOT Chief of Policy, welcomed everyone and introduced Chris Swanson, VDOT Environmental Division Director, as the meeting's facilitator.

### **Approval of June 2022 minutes**

Minutes approved

### **Sustainability Office**

#### *Staffing Update*

The staffing process continues for the new Office of Transportation Sustainability (OTS). Mr. Swanson introduced Ms. Erin Belt as the OTS Decarbonization Program Manager.

### **Resilience**

#### *Virginia Institute of Marine Science (VIMS) Study Update*

Mr. Mike Fitch, Director of the Virginia Transportation Research Council, provided an update on the VIMS Study. Mr. Fitch provided an overview of the VDOT/VIMS partnership, including the two established tasks and the project timeline. For Task 1, *Transportation Infrastructure Vulnerability*, Mr. Fitch provided a brief discussion on subtasks that have been previously presented to the Subcommittee. Mr. Fitch provided a summary of new subtask efforts that have progressed since the June Subcommittee meeting, which included progress on the Road Network Analysis and Interactive Planning Portal. Mr. Fitch noted during his discussion on the planning portal a need to get information to localities in an efficient manner.

Discussion from the CTB members respective to Task 1 included the need for the Department to assess the order of magnitude of the problem and begin to identify what needs to be accomplished and how much it is going to cost to address. The subcommittee inquired as to when the VIMS model would be available for localities. Several members indicated a sense of urgency given the importance of the issue as well as a need to revamp funding programs as appropriate.

Mr. Fitch also presented on Task 2, *Study Ecosystem Impacts of Transportation Infrastructure*, which had not been previously presented to the Subcommittee. Mr. Fitch's discussion focused on

the effort to assess the potential for shifting habitat distribution, local land use changes, and transportation infrastructure to impact rare, threatened, or endangered species habitats by virtue of changing proximities between 2020 and 2080.

## **Decarbonization**

### *VDOT Greenhouse Gas Emission Reduction Update*

Mr. Chris Berg, Director of OTS, provided an update on the Department's Greenhouse Gas (GHG) Emission reduction efforts since the June Subcommittee meeting. Mr. Berg provided a brief overview of emissions related to Virginia's Transportation Sector as well as GHG policy and regulations that drive emission reductions. Mr. Berg provided an overview of the Department's proposed reduction approach including utilization of funding available through the federal Bipartisan Infrastructure Law (BIL), which includes such programs as the National Electric Vehicle Infrastructure (NEVI), Carbon Reduction Program (CRP), and the discretionary Corridor Charging Grant Program.

Discussion from the CTB members respective to the GHG update included the need for more up-to-date emission information versus the 2005 and 2018 inventories that were referenced during the meeting. There was a discussion on the state taking the lead on emission reduction efforts from their own operations as a means to provide lessons learned to the private sector. In addition, there was a request to clarify what parts of the highway system the CRP program applies. In follow-up to the meeting, Department staff have verified the CRP program applies to Federal-aid highways, defined as roads, streets, parkways, and interstates, the cost of which is assumed by a State transportation department, and excluding local roads or rural minor collectors.

## **Public Comment**

There was one public comment from Ms. Whitney Katchmark, from Hampton Roads Planning District Commission. Ms. Katchmark stated an interest in becoming more involved with the Subcommittee, and welcomed ideas on how to improve collaboration.

*The meeting was adjourned at 9:50 a.m.*

# Virginia Institute of Marine Science (VIMS) Study Update

CTB Environmental Subcommittee  
October 25, 2022

# VDOT/VIMS Partnership

VDOT partnered with VIMS and SNR to initiate a study to begin to address recurrent flooding

Task 1) Assess climate vulnerability and adaptation of transportation infrastructure

Task 2) Assess ecosystem impacts of transportation infrastructure under rising sea levels



# VDOT/VIMS Partnership

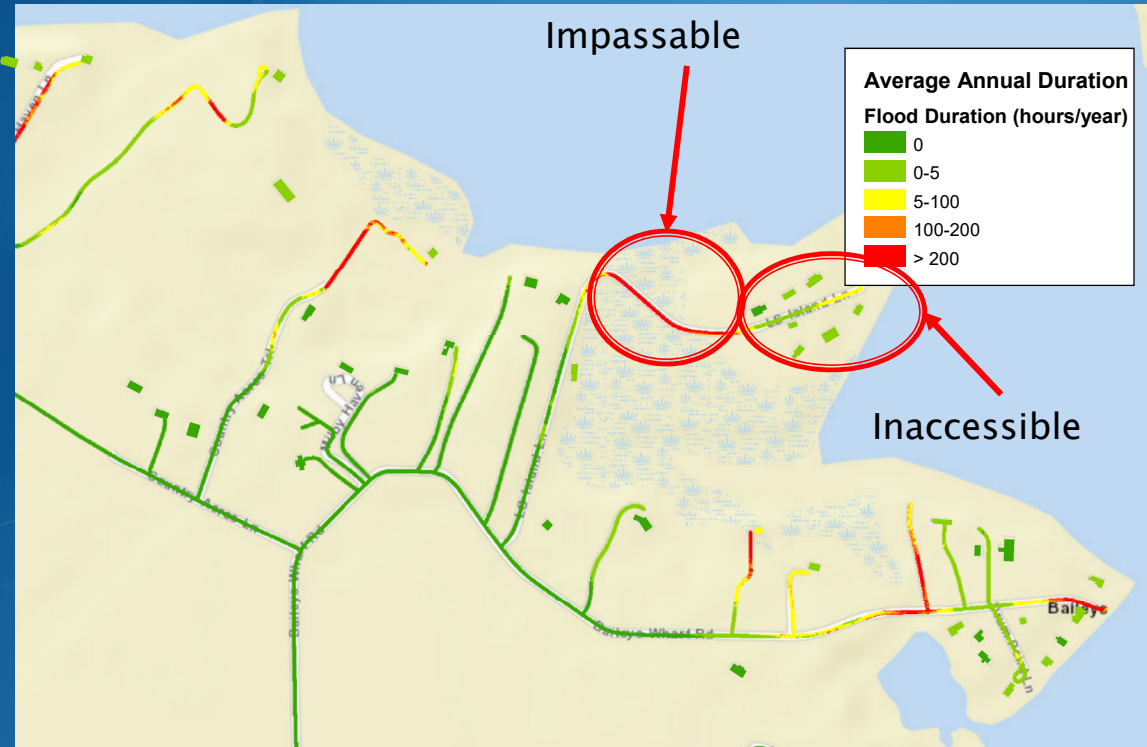
## PROJECT BACKGROUND

- MOU between VDOT and Secretary of Natural Resources: signed June 2019
- Official start date: August 2019
- Anticipated completion date: September 2024
- Timeframe covered: 2020 – 2100
- Study Area: Virginia's Coastal Zone and Planning District 8 – 46 localities: 29 counties and 17 cities

# Task 1. Transportation Infrastructure Vulnerability

- *Examine all roads with respect to FEMA Flood Hazard Zones*
- *Update recurrent road flooding maps*
- *Analyze road elevations and Return Flood Frequency (RFF) relative to the Best Available Tide Gauge data for the area*
- **Road Network Analysis (RNA) to evaluate vulnerability of important VDOT infrastructure**
- **Interactive planning portal for VDOT**

# A Road Network Analysis



Average Annual Flooding: 2050

View impacts of flooding on  
roads

## 1. Choose a starting point:

Norfolk Residency

## 2. Adjust flood level

6Ft

2100

5Ft

2080

4Ft

2070

3Ft

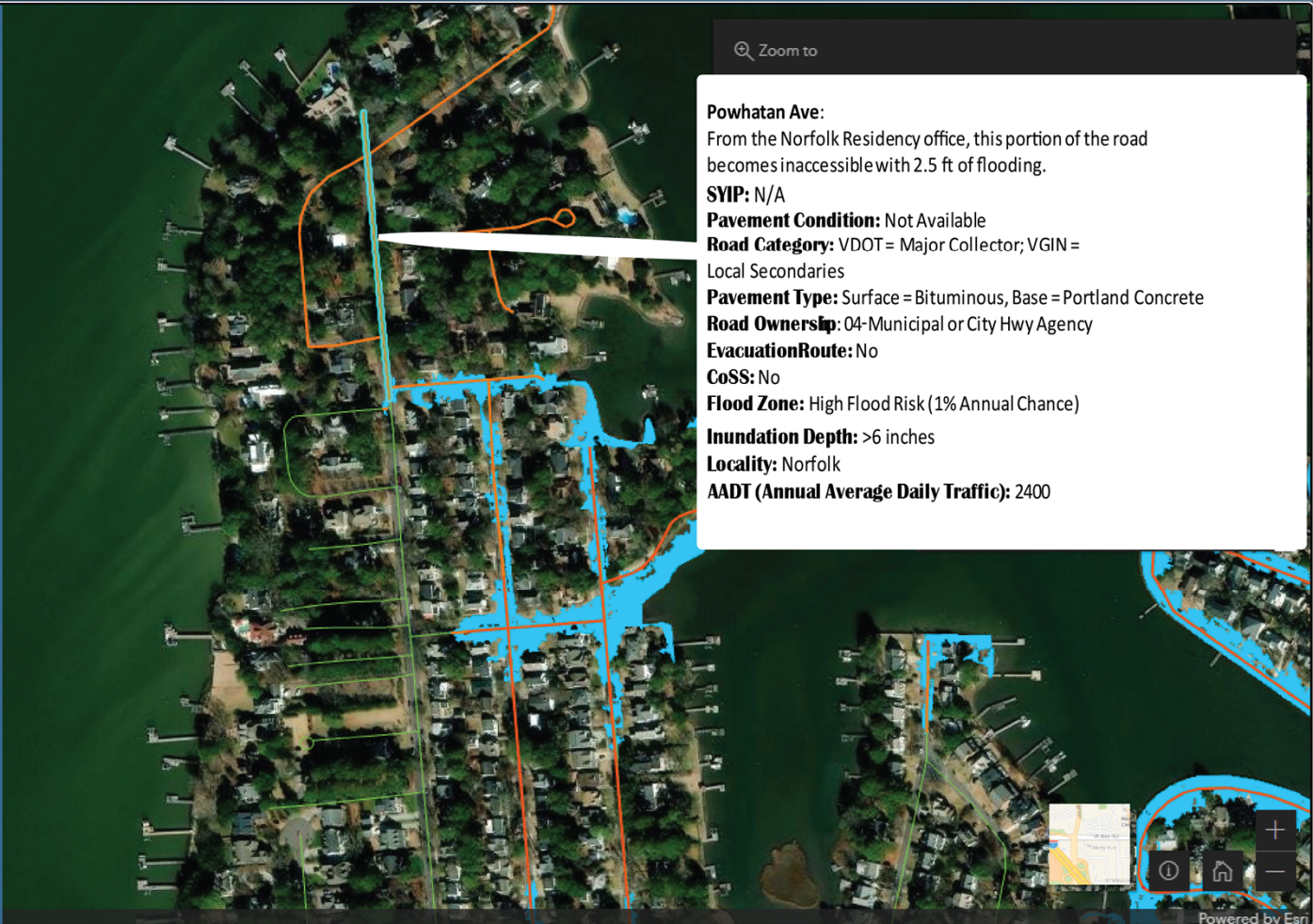
2Ft

2040

1Ft

NOAA 2017  
Inter-High

MHW





# Task 2. Study ecosystem impacts of Transportation Infrastructure

- Model current habitat distribution for rare, threatened or endangered (RTE) and migratory bird species
- Forecast habitat distribution shifts for target species
- Assess the potential for existing and planned local land use changes and transportation infrastructure to become a detrimental impact on future RTE species habitats by virtue of changing proximities between 2020 and 2080
- Provide outcomes in *Interactive planning portal for VDOT*

# Coastal Zone RTE Species & Migratory Birds – 32 total



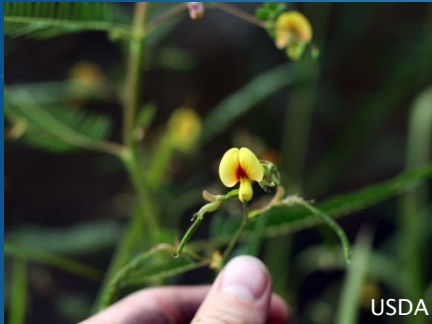
Mabee's Salamander



Saltmarsh Sparrow



Northeastern Beach  
Tiger Beetle



Sensitive Joint-vetch

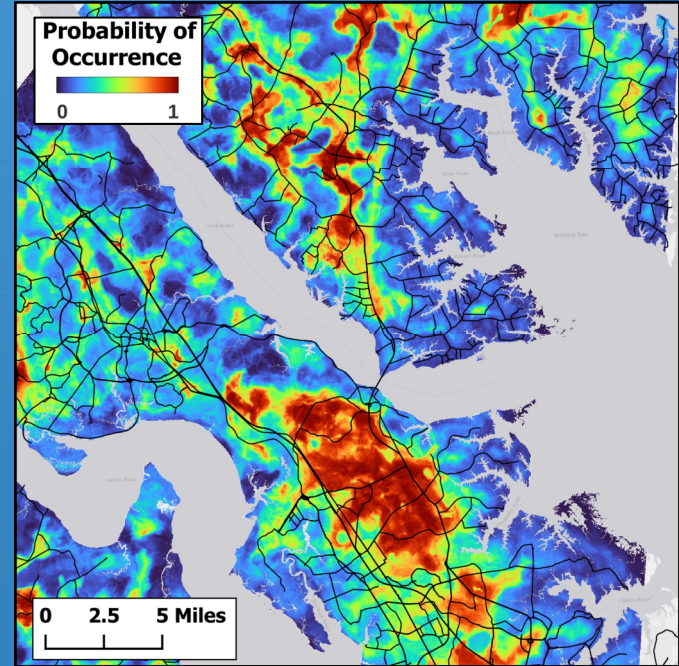
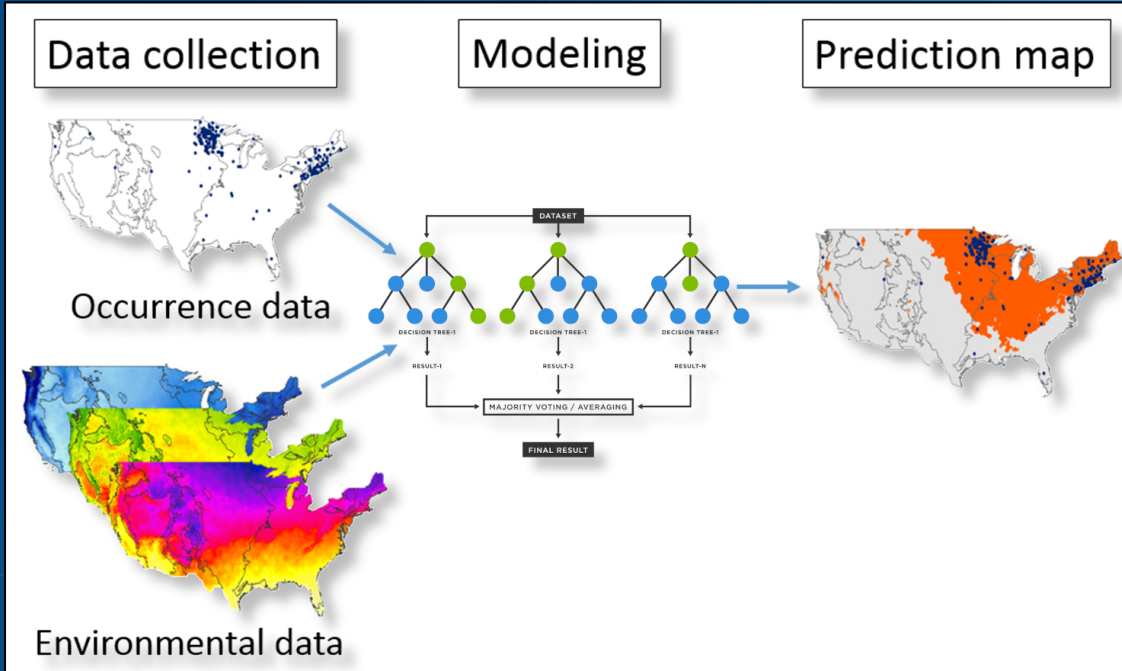


American Shad



Eastern Chicken Turtle

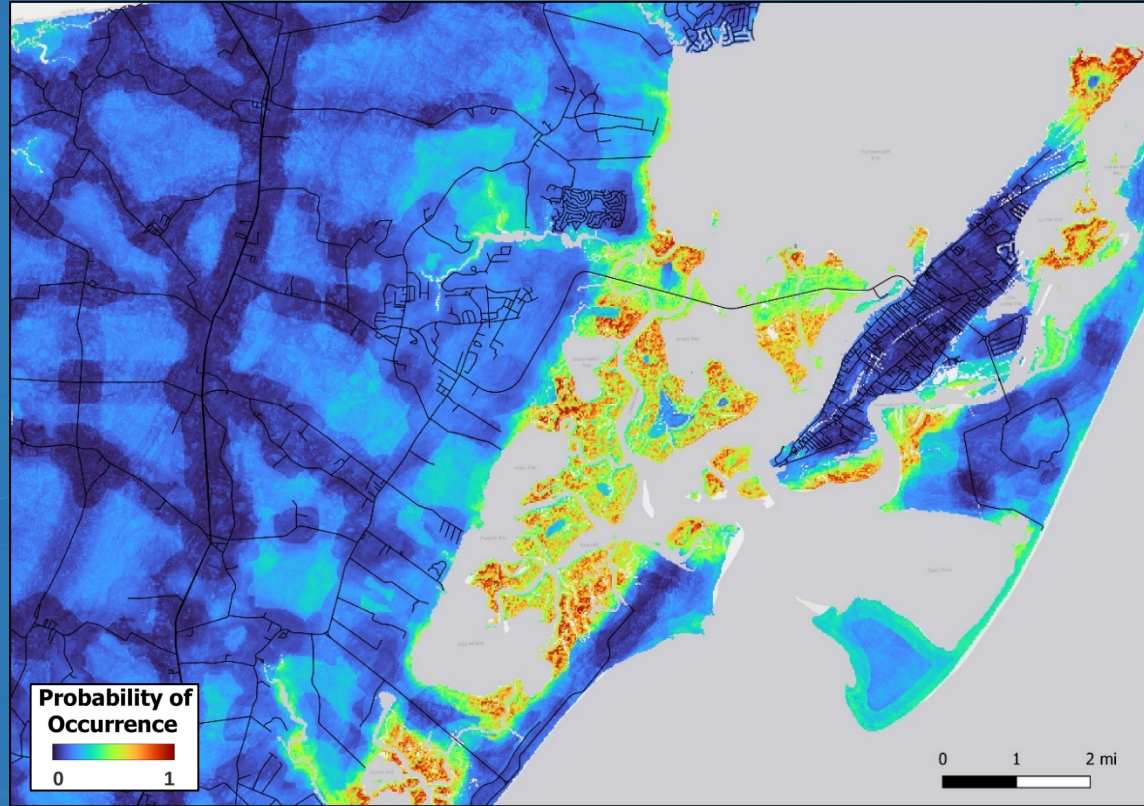
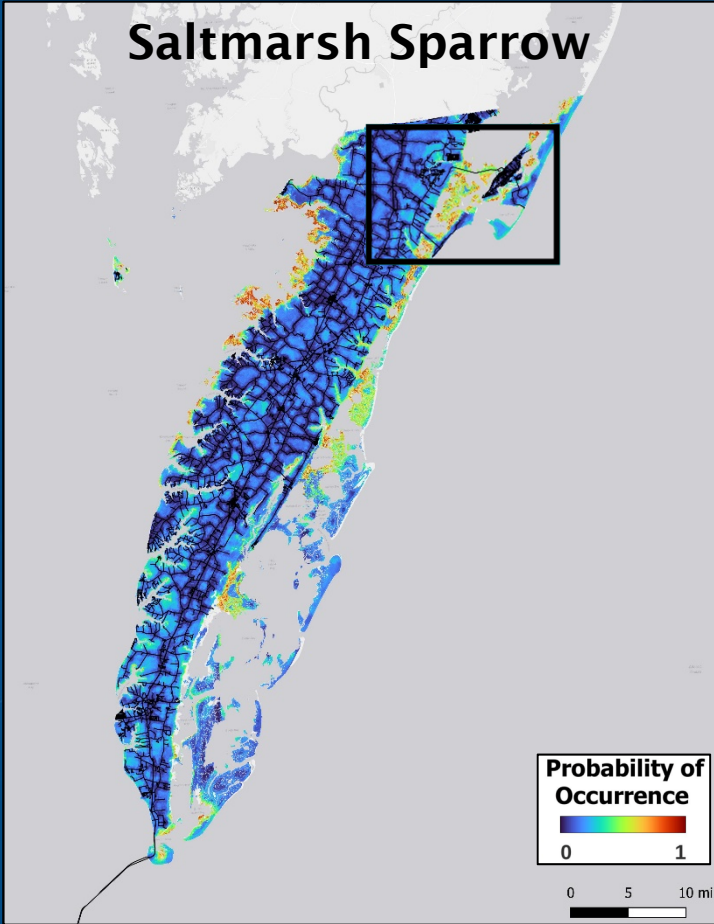
# Species distribution models to inform potential use conflicts





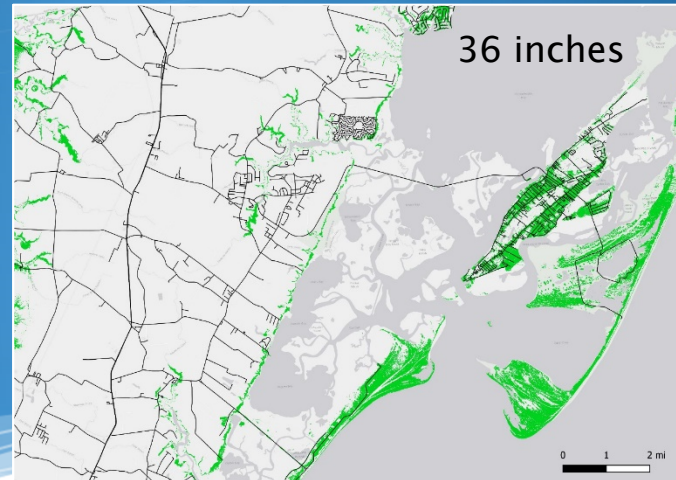
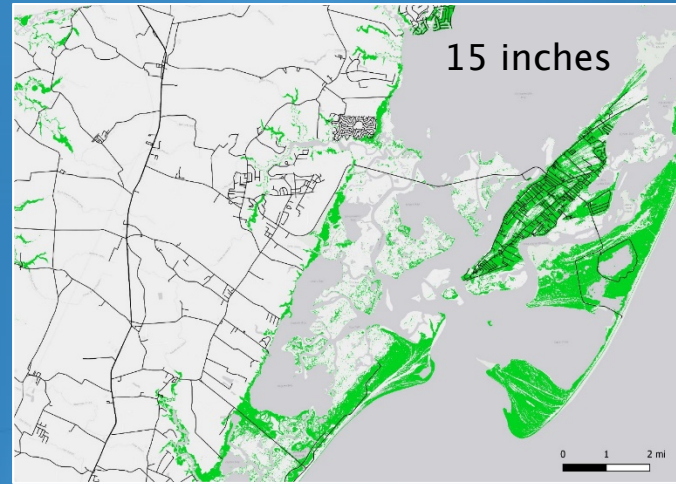
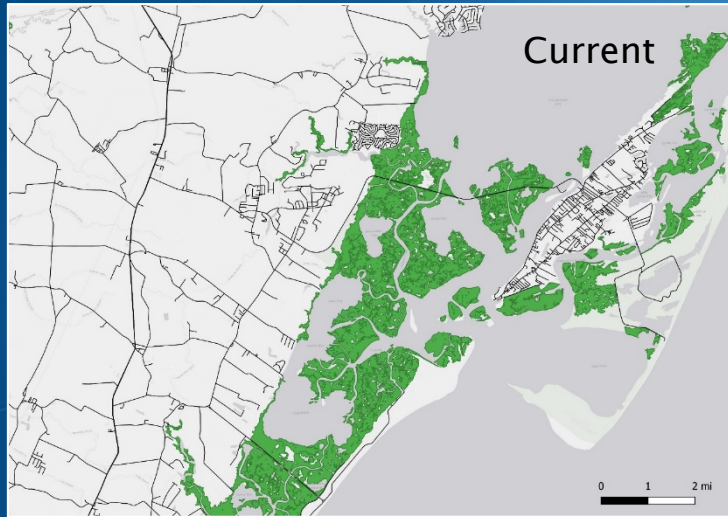
# Future SLR shifts and conflicts

## Saltmarsh Sparrow

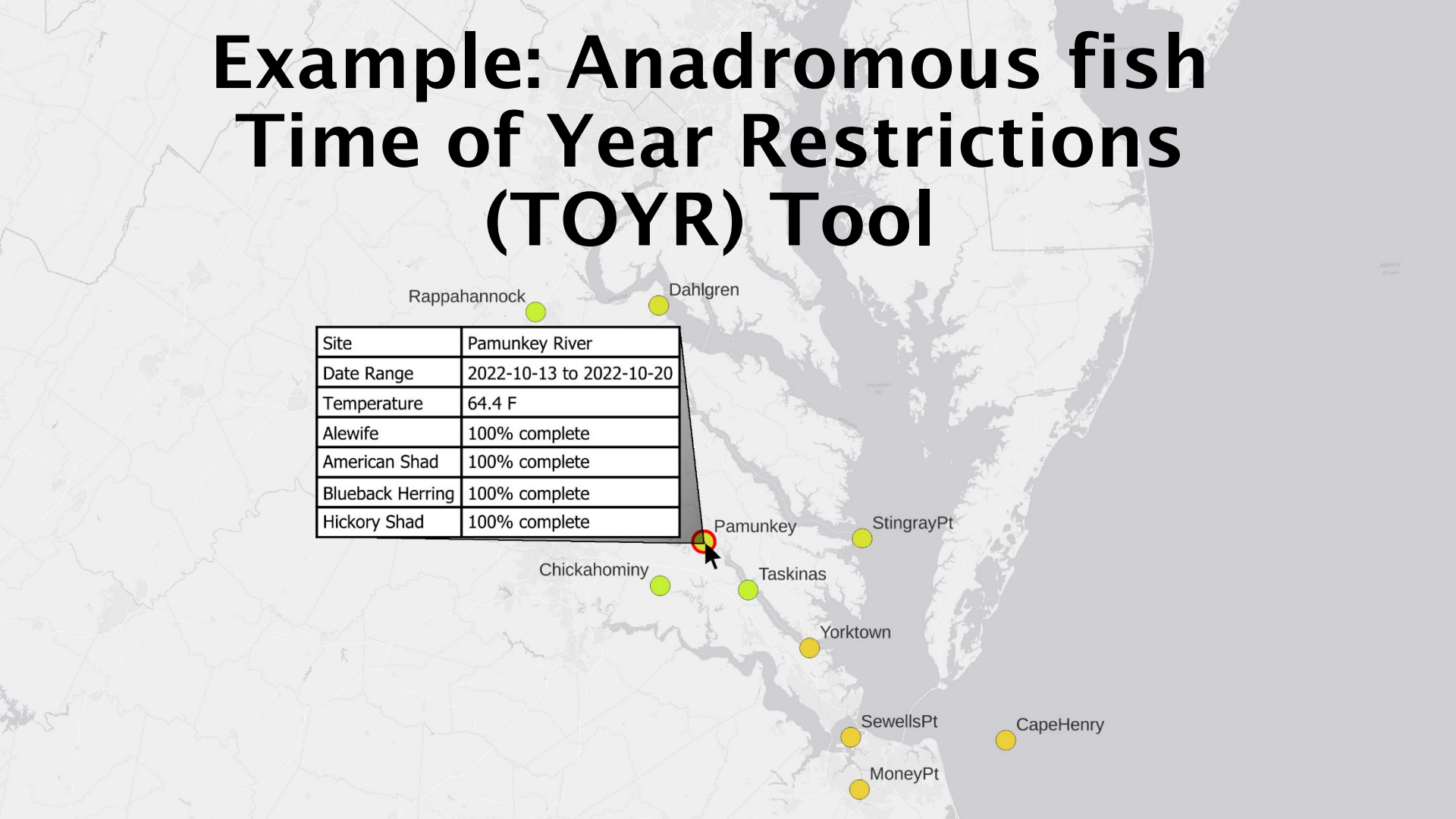




# Example: Saltmarsh Sparrow



# Example: Anadromous fish Time of Year Restrictions (TOYR) Tool



Site	Pamunkey River
Date Range	2022-10-13 to 2022-10-20
Temperature	64.4 F
Alewife	100% complete
American Shad	100% complete
Blueback Herring	100% complete
Hickory Shad	100% complete

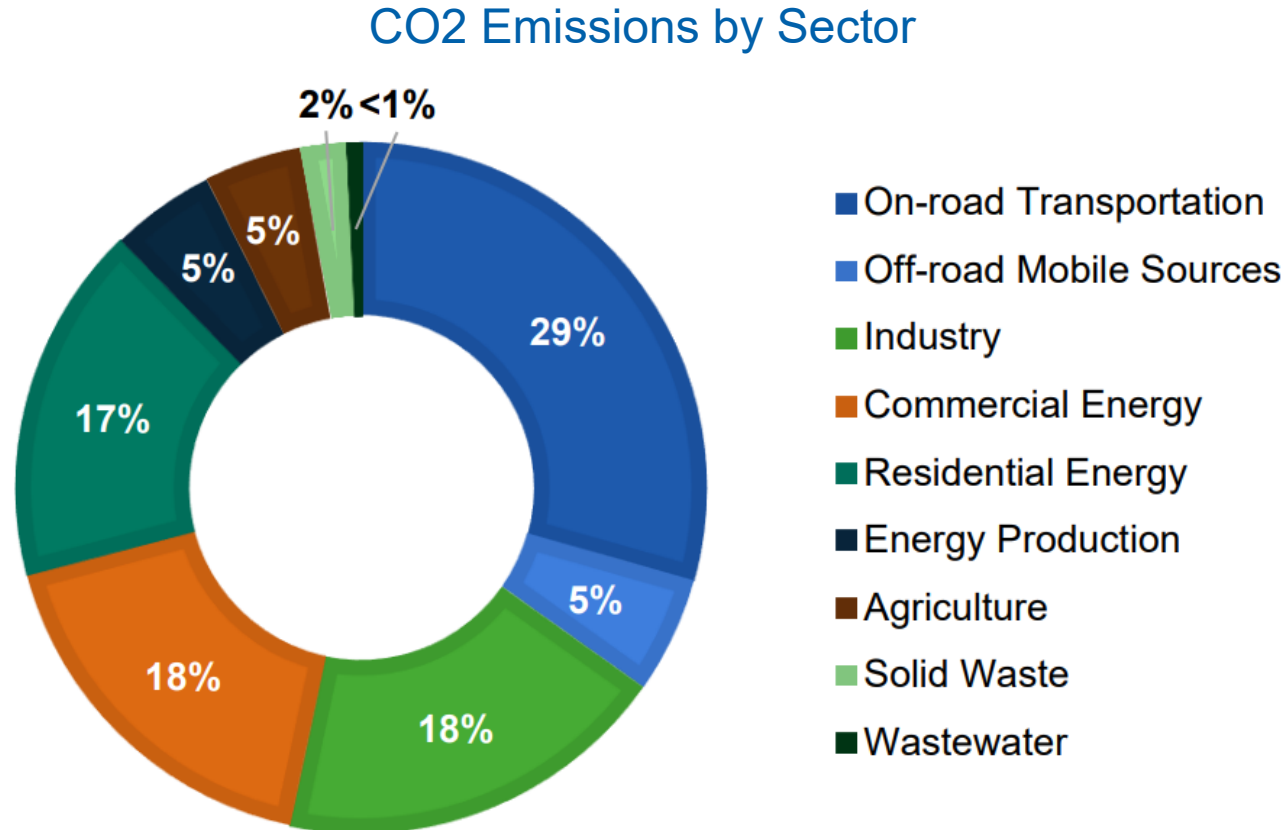
# VDOT GREENHOUSE GAS REDUCTION

Commonwealth Transportation Board - Environmental Subcommittee

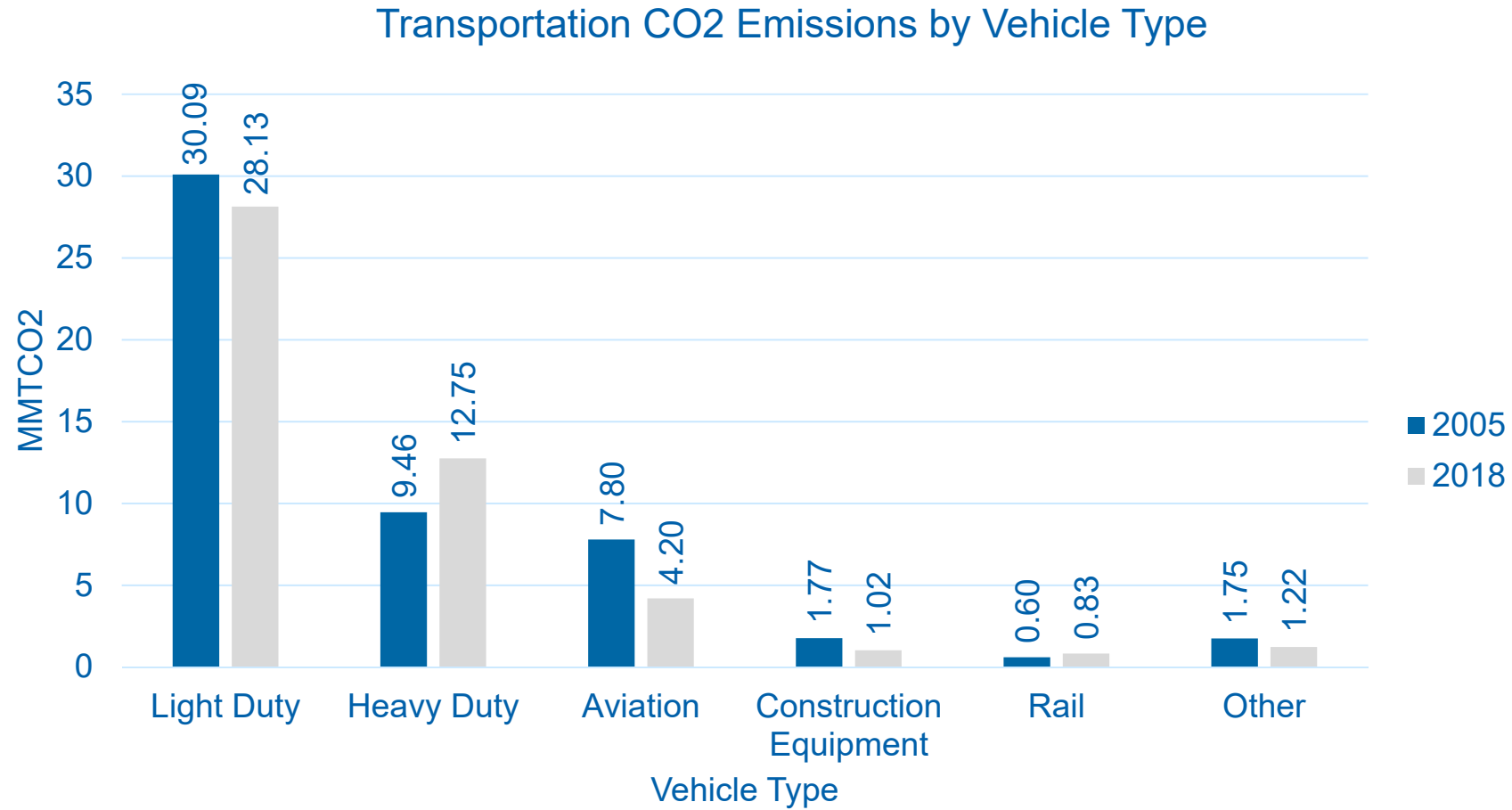
 Chris Berg, Director of Office of Transportation Sustainability

October, 25 2022

# VIRGINIA TRANSPORTATION GHG EMISSIONS



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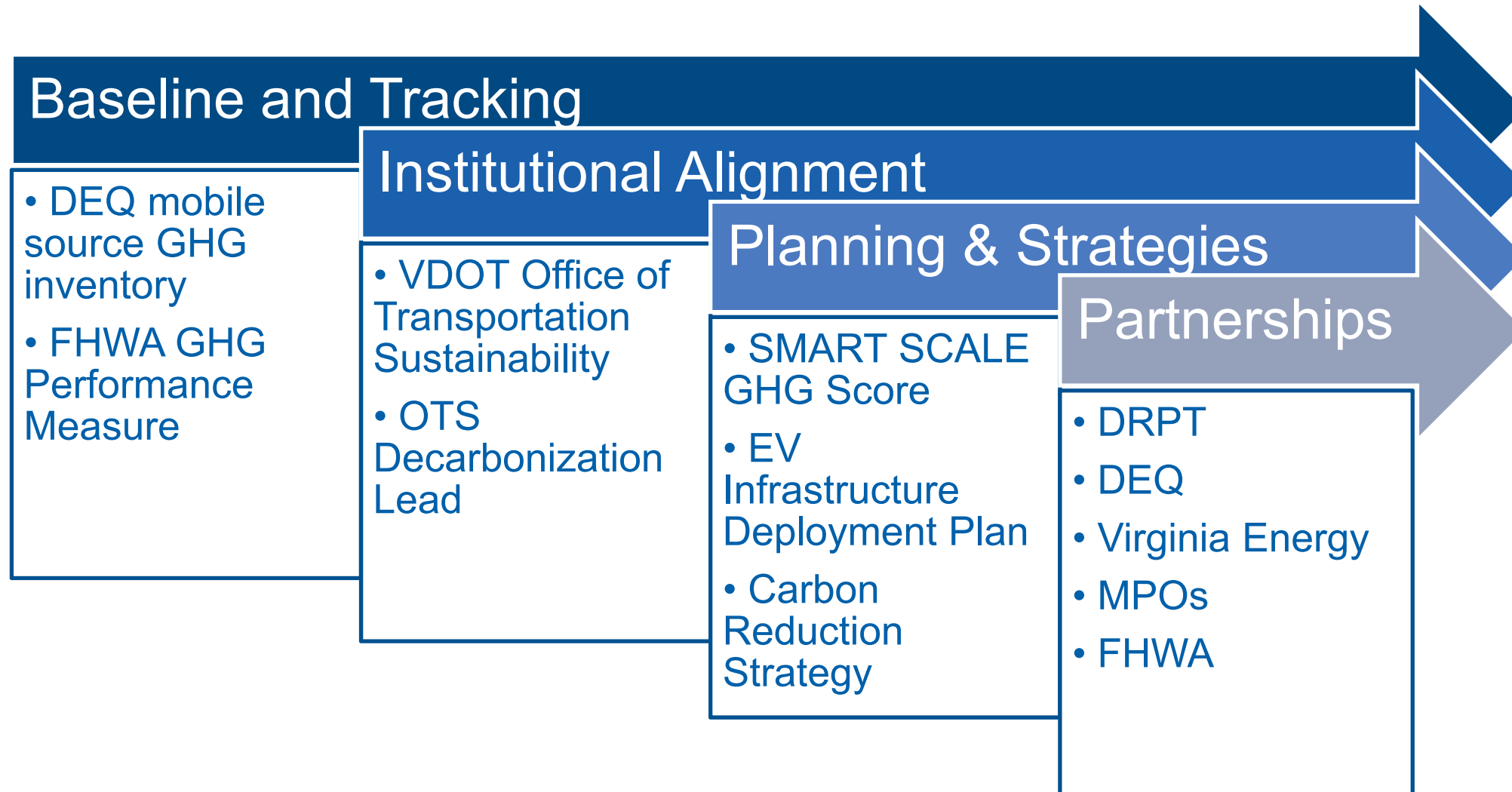
# GHG POLICY AND REGULATORY DRIVERS

- IIJA funding for GHG reduction
- DEQ GHG inventory
- Agreement with FHWA to address GHGs in NEPA
  - Quantitative analysis conducted for all Environmental Assessments and Environmental Impact Statements
- Proposed FHWA GHG Performance Measure
  - State DOTs to set 2- and 4-year declining targets, report progress toward Biden Administration goal of 50% GHG reduction by 2030, net-zero by 2050

# GHG REDUCTION APPROACH

- Data-driven identification of high return on investment strategies to lower the carbon-intensity of transportation system
  - Electrification, multi-modal transportation, reduce vehicle miles travelled, integrate low-carbon materials
- Infrastructure Investment and Jobs Act (IIJA)
  - National Electric Vehicle Infrastructure (NEVI) Program
  - Discretionary Grant Program for Charging and Fueling Infrastructure
  - Carbon Reduction Program (CRP)
  - Additional programs

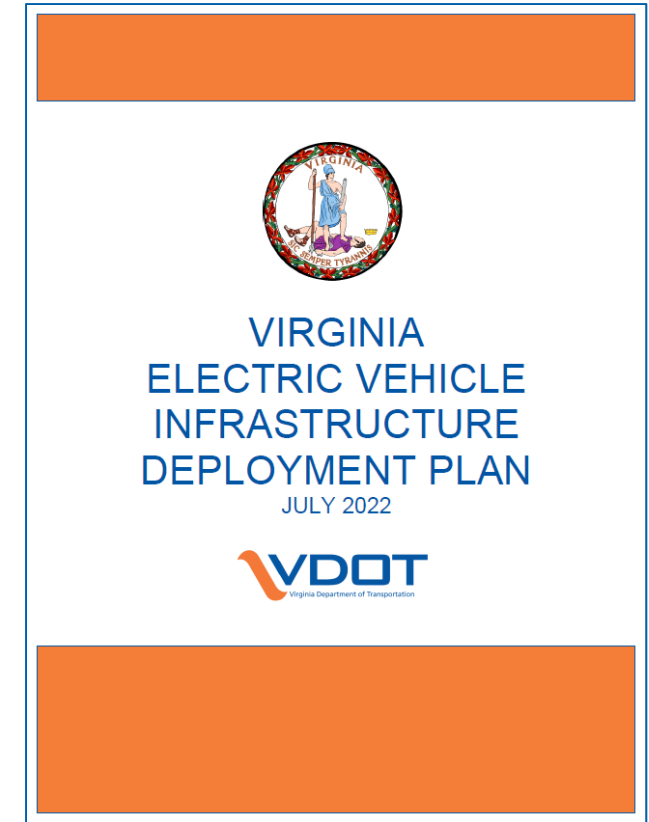
# GHG REDUCTION APPROACH





# NATIONAL ELECTRIC VEHICLE INFRASTRUCTURE (NEVI) PROGRAM

- Authorized by Infrastructure Investment and Jobs Act (IIJA)
- Virginia: \$100 million in federal formula funding over 5 years
- IIJA and FHWA Guidance establish program requirements
- Strategically deploy EV charging infrastructure and establish an interconnected national charging network
- **Virginia EV Infrastructure Deployment Plan approved September 27**



# DISCRETIONARY GRANT PROGRAM FOR CHARGING AND FUELING

- Authorized by IIJA
- Federal guidance is forthcoming
- \$2.5 billion in discretionary grant funding over 5 years
- State and local authorities that own publicly accessible transportation facilities
  - \$1.25 billion Corridor Charging Grant Program
    - Focused on filling gaps in Alternative Fuel Corridors
  - \$1.25 billion Community Charging Grant Program
    - Focused on rural areas, low- and moderate-income neighborhoods and communities with limited private parking

# CARBON REDUCTION PROGRAM (CRP)

- Authorized by IIJA
- Reduce CO<sub>2</sub> emissions from on-road highway sources
- \$236M for Virginia over 5 years
- Carbon Reduction Strategy by November, 2023



# CARBON REDUCTION PROGRAM (CRP)

- Carbon Reduction Strategy – Will identify projects and strategies to reduce transportation emissions
- Eligible activities:
  - Public transportation projects
  - Trail facilities for pedestrians and bicyclists
  - Congestion management technologies
  - Energy efficient street lighting and traffic control devices
  - Purchase of electric construction equipment/vehicles and retrofit of diesel trucks

# ADDITIONAL IJA GHG REDUCTION FUNDING PROGRAMS

## New Programs

- Reduction of Truck Emissions at Port Facilities Program
- Congestion Relief Program
- FTA Low or No Emission Vehicle Program

## Existing Programs

- Congestion Mitigation and Air Quality Improvement Program
- Transportation Alternatives (TA) Set-Aside

# GHG REDUCTION TIMELINE

